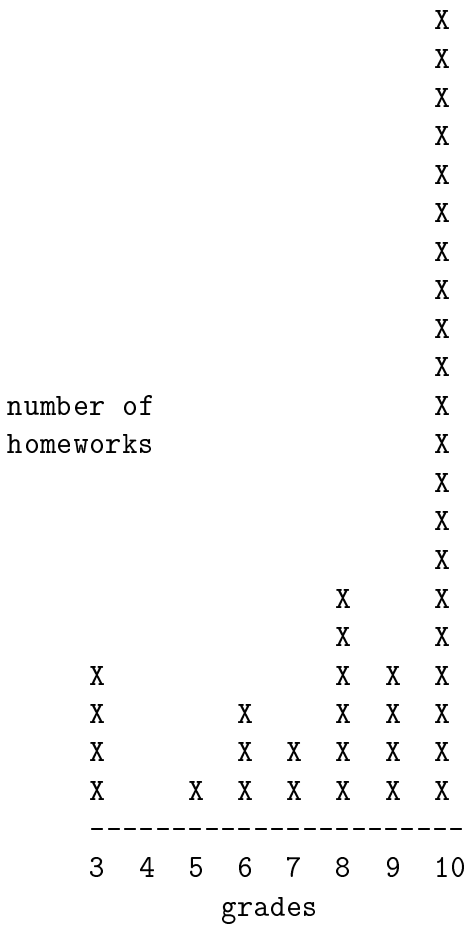
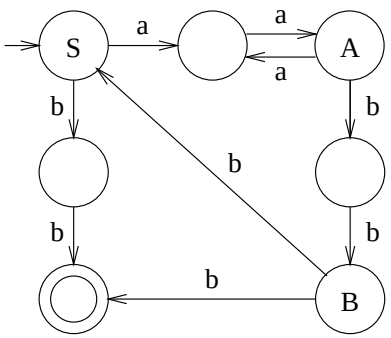
Automata Theory: Solutions 5



Problem 1
Draw an NFA for the language defined by the following grammar:

$S \to aaA \mid bb$
$A \to aaA \mid bbB$
$B \to bS \mid bC$
$C \to S \mid \lambda$



Problem 2
Give a right-linear and left-linear grammar for the following language:

$$\{(ab)^n(bb)^m a : \ n \geq 1, m \geq 2\}$$

Right-linear grammar:
$S \to abS \mid abA$
$A \to bbA \mid bbbba$

Left-linear grammar:
$S \to Aa$
$A \to Abb \mid Bbbbb$
$B \to Bab \mid ab$